



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,487	10/27/2003	Steven D. Kaplan	0290527.00121US1	4276
23483	7590	10/02/2006	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR LLP			MAKI, STEVEN D	
60 STATE STREET			ART UNIT	
BOSTON, MA 02109			PAPER NUMBER	
			1733	

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/694,487

**Applicant(s)**

KAPLAN, STEVEN D.

**Examiner**

Steven D. Maki

**Art Unit**

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-12 and 57-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-12, 57-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

Art Unit: 1733

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8-14-06 has been entered.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 3, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of the low friction material defining a "generally side-facing surface" of the shoulder. Original figure 1 shows the portion of low friction material as being located at a side surface of the tire. However, it is not seen how "generally side-facing surface" (emphasis added), which has no literal support in the original disclosure, is supported by original figure 1.

Art Unit: 1733

With respect to this 112 first paragraph rejection, claim 1 but not claim 3 was amended in the response filed 8-14-06. In claim 3, it is suggested to change "generally side-facing" to --side--.

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5) Claims 1, 3-12 and 57-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1 and 58, it is unclear if a vehicle or a tire per se is being claimed since the preamble recites "A road-engaging tire" (indicating that a tire per se is being claimed) whereas the body recites "said tire being mounted on a wheel of a vehicle such that the tire directly contacts the road" (indicating that a vehicle is being claimed). In each of claims 1 and 58, the following changes are suggested: (1) change "A road engaging tire comprising" to --A vehicle comprising a road engaging tire and a wheel; wherein said tire comprises:-- and (2) after "said tire being mounted" change "on a wheel of a vehicle" to --on the wheel of the vehicle--.

In claim 58, "in response to side surfaces exerted on the tire" is ambiguous. In claim 58, it is suggested to change "in response to side surfaces exerted on the tire" to --in response to side forces exerted on the tire--.

Claims 59 and 60 are circular and confusing. Also, it is unclear how many ribs are required by claim 60. The following changes are suggested: (1) in claim 59 line 3

Art Unit: 1733

delete --formed by the rib-- and (2) change last three lines of claim 60 to --in ribs that define portions of the second side surface--.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7) **Claims 1, 3-4, 6, 58-61 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 403 (JP 2-197403) in view of Scarpitti et al (US 6,443,199) and Shibata (US 4,152,186).**

Japan 403 discloses a pneumatic tire having a tread 2, sidewalls 1, bead portions and a low friction member 8 on the side of the tire as shown in figure 1. During unduly sudden turning, the low friction members contact the road to force the tire to slip. In figure 1, Japan 403 appears to show grooves. In any event: As to claim 1, it would have been obvious to provide the Japan 403's tread with "ribs and grooves" (blocks and grooves) as claimed since it is well known / conventional in the tire art to provide a tread with blocks and grooves in order to improve wet traction / anti-hydroplaning performance as evidenced by Scarpitti et al.

With respect to "shoulders" (claim 1), it would have been obvious to one of ordinary skill in the art to form Japan 403's tire such that the tire has "shoulders" wherein each shoulder is between the radially outwardly facing tread surface and one of the sidewalls and to provide the shoulder with the low friction material as claimed since (1) Japan 403 teaches **providing a tire with low friction members arranged below the**

Art Unit: 1733

*tread surface at each side of the tire* as shown in figure 1 so that upon unduly sudden turning of a vehicle, the low friction member contacts the road surface and forces the tire to slip; (2) Scarpitta et al shows "shoulders" of a tread formed by extending tread elements of a tread beyond the footprint edge, below the tread surface and downward along *the side* of the tire to a location below the belt (front tire figure 5, rear tire figure 6) in order to allow water to be directed toward the shoulder and out of the footprint, and (3) Shibata suggests extending "shoulders" (joint rubber 7) of the figure 2 tread along *the side* of the tire to a position  $J_p$  spaced from the tread surface by a distance  $A$  equal to 20-40% of the height  $H$  so that the adhesive property between the tread and the sidewall rubber is excellent and will not separate. Hence, Scarpitti et al and Shibata suggest extending the tread "shoulder" (structure and composition respectively) below the radial location at which Japan 403 locates the low friction member 8. It is acknowledged that Japan 403 teaches using the low friction material to prevent excessive deformation of the tire so that the tire does not separate from the rim and that applicant teaches that the low friction material is used for preventing rollover. However, claims 1 and 43 fail to require the low friction member to be closer to the tread surface than that disclosed by Japan 403 since Japan 403 teaches locating low friction material at a radial location on the side of the tire, which contacts the ground upon unduly severe turning. The description of "thereby minimizing vehicle rollover or oversteer" fails to require a radial location or low friction material different than that disclosed by Japan 403 for the low friction member 8.

As to claim 3, Japan 403 suggests providing low friction material on both sides of

Art Unit: 1733

the tire.

As to claims 4 and 6, it would have been obvious to mold the low friction material into the shoulder (claim 4) or apply the low friction material on the shoulder as a coating (claim 6) since Japan 403 teaches affixing a low friction member to the side of the tire or integrally forming the low friction member with the material of the tire.

As to claims 58 and 59, Japan 403 suggests locating low friction material at the side of a tire and Scarpitta et al teaches a side of a tire defined in part by circumferentially spaced blocks.

As to claim 60, Japan 403 suggests providing low friction material on both sides of the tire.

As to claims 61 and 63, it would have been obvious to mold the low friction material into the shoulder (claim 61) or apply the low friction material on the shoulder as a coating (claim 63) since Japan 403 teaches affixing a low friction member to the side of the tire or integrally forming the low friction member with the material of the tire.

**8) Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 403 in view of Scarpitti et al and Shibata as applied above and further in view of Japan 109 (JP 4-159109).**

As to claim 57, it would have been obvious to provide Japan 403's sidewall with a extra high molecular weight polyethylene ("low friction material") since Japan 109 suggests forming the sidewall of a tire using a polyethylene sheet of extra high molecular weight to reduce weight of the tire.

**9) Claims 5, 8 and 62 are rejected under 35 U.S.C. 103(a) as being**

Art Unit: 1733

**unpatentable over Japan 403 in view of Scarpitta et al and Shibata as applied above and further in view of Japan 177 (JP 3-246177).**

As to claims 5, 8 and 62, it would have been obvious to use Teflon for Japan 403's low friction material since conventional low friction material includes Teflon (PTFE) as evidenced by Japan 177. As to claims 5 and 62, Japan 177 suggests providing low friction material between an outer surface of a tread and a sidewall by using Teflon particles in rubber (figure 12).

**10) Claims 5, 7 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 403 in view of Scarpitta et al as applied above and further in view of Japan 413 (JP 63-218413).**

It would have been obvious to use the claimed material for Japan 403's low friction members since conventional low friction material includes ultrahigh molecular weight polyethylene incorporated in rubber as evidenced by Japan 413.

**11) Claims 5, 9 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 403 in view of Scarpitti et al and Shibata as applied above and further in view of Costa Pereira et al (US 6,116,313).**

It would have been obvious to use the claimed material for Japan 403's low friction members since conventional low friction material includes rubber based on dimethyl siloxane (silicone material) / fatty acid amide in rubber blend (low friction material incorporated in rubber) as evidenced by Costa Pereira et al (col. 2 lines 53-64)

**12) Claims 7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 403 in view of Scarpitta et al and Shibata as applied**



Art Unit: 1733

**above and further in view of Muramatsu et al (US 5,540,489) and/or Bartkowiak (US 5,069,331).**

It would have been obvious to use the claimed material for Japan 403's low friction members since (1) conventional low friction material includes nylon, ultrahigh molecular weight polyethylene and ceramic as evidenced by Muramatsu and/or (2) conventional low friction material includes nylon, Kevlar (aromatic polyamide) and ceramic as evidenced by Bartkowiak (col. 4 lines 30-40).

**Allowable Subject Matter**

**13) Claims 1, 3-12 and 57 would be allowable if (1) rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and (2) amended to include the subject matter shown in figures 1-3 (i.e. amended to recite --wherein the ribs forming said side surface are separated from a central region of the tread by a circumferential groove and wherein the low friction material is spaced from the tread surface by a distance less than the depth of the circumferential groove--).**

If the examiner's proposal is accepted, it is also suggested to amend the specification to provide literal antecedent basis for the added language. The subject matter of --wherein the ribs forming said side surface are separated from a central region of the tread by a circumferential groove and wherein the low friction material is spaced from the tread surface by a distance less than the depth of the circumferential groove-- would not constitute new matter if added to the specification. More specifically, the subject matter of --wherein the ribs forming said side surface are separated from a

Art Unit: 1733

central region of the tread by a circumferential groove and wherein the low friction material is spaced from the tread surface by a distance less than the depth of the circumferential groove-- is reasonably conveyed by the original disclosure for example by original figures 1-3 (especially figure 1) and page 1 last eight lines, page 2 lines 1-13, page 6 last fifteen lines, page 7 lines 1-7, page 9 lines 8-17 of the original specification.

There is no motivation to locate Japan 403's low friction material at a radially higher location so as to be positioned as shown in figure 1 of applicant's original disclosure.

#### Remarks

14) The rejection using Japan 177 as a primary reference has been withdrawn in view of the amendment to claims 1 and 58.

With respect to Japan 403, applicant's arguments with respect to claims 1, 3-12, 57-63 have been considered but are moot in view of the new ground(s) of rejection.

With respect to Japan 403, applicant's arguments filed 8-14-06 have been fully considered but they are not persuasive.

Applicant argues that the low friction member disclosed in Japan 403 is not provided in the tread shoulder defined in applicant's invention nor does it overlap the region in application's invention. This argument is not persuasive since (1) the claims fail to require the low friction member to be closer to the tread surface than that disclosed by Japan 403 and (2) Scarpitti et al and Shibata suggest extending the tire "shoulder" to a location radially beneath the location illustrated by applicant or Japan 403.

Art Unit: 1733

Applicant comments that Japan 403 teaches that the border between the tread and the sidewall does not contact the road when under standard driving conditions a sudden turn is made. This observation is off-point because both applicant's low friction member and Japan 403's low friction member contact the road when a hard turn / unduly sudden turn is made. Applicant's specification describes that the low friction material will come into contact with the road when the tire makes a hard turn caused by turning the steering wheel approximately 270 degrees (specification top of page 10). Japan 403 describes the low friction member 8 contacting the road when an "unduly sudden turn" [in contrast to a sudden turn under standard driving conditions] is made. See translation of Japan 403 provided by applicant. Since applicant and Japan 403 both teach locating the low friction material on the tire such that it contacts the road during a "hard" / "unduly severe" turn, applicant's claims are sufficiently broad to read on the radial location for the low friction member as disclosed by Japan 403. However, the examiner agrees that applicant discloses a different, specific and non-obvious radial location for the low friction member. See indication of allowable subject matter in this office action.

15) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

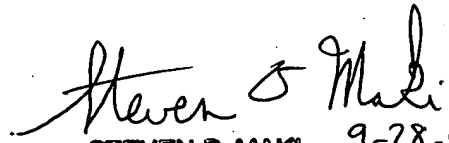
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

Art Unit: 1733

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
September 28, 2006

  
STEVEN D. MAKI 9-28-06  
PRIMARY EXAMINER